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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,769	07/10/2003	Takeo Nakamoto	402697	9473
23548	7590	06/18/2004	EXAMINER	
LEYDIG VOIT & MAYER, LTD 700 THIRTEENTH ST. NW SUITE 300 WASHINGTON, DC 20005-3960			DANG, PHUC T	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/615,769	NAKAMOTO ET AL.	
	Examiner	Art Unit	
	PHUC T DANG	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on election filed on April 20, 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 4-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0703</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

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### **DETAILED ACTION**

#### **Election/Restrictions**

1. Claims 1-3 are considered for examining by election filed on April 20, 2004.
2. Claims 4-11 are non-elected claims and still pending in the application.

#### **Oath/Declaration**

3. The oath/declaration filed on July 10, 2003 is acceptable.

#### **Priority**

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### **Information Disclosure Statement**

5. The office acknowledges receipt of the following items from the applicant:  
Information Disclosure Statement (IDS) filed on July 10, 2003.

#### **Specification**

6. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meakin (U.S. Patent No. 5,143,018) in view of Marte et al. (U.S. Patent No. 6,139,755).

Meakin discloses a chemical process comprising:

a chemical processing cup (1, Fig. 1), in which a member-to-be-processed (7, Fig. 1) is to be placed; and

a pumping device (5, Fig. 1) for circulating a liquid chemical within the chemical processing cup, wherein the member-to-be-processed has surface (2, Fig. 1) to-be-processed which is placed face up in the chemical processing cup, the surface-to-be-processed is chemically processed while the liquid chemical is circulated along the surface-to-be-processed in substantially a single direction at all the times [col. 2, lines 13-59].

Meakin discloses all the features of the claimed invention as discussed above, but does not disclose the liquid chemical is circulated along the surface-to-be-processed a velocity gradient of at least 300/second.

Marte et al., however, disclose the liquid chemical is circulated along the surface-to-be-processed a velocity gradient of at least 300/second [col. 7, lines 62-col. 8, lines 12].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Marte et al. to Meakin discussed above such that the liquid chemical is circulated along the surface-to-be-processed a velocity gradient of at least 300/second for a purpose of improving a chemical processor.

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8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meakin and Marte et al. in view of Agosta (U.S. Patent No. 4,468,127).

Meakin and Marte et al. disclose all the features of the claimed invention as discussed above, but do not disclose the chemical processor including a flow rate regulation plate opposing the surface-to-be-processed and located in the chemical processing cup.

Agosta, however, disclose the chemical processor including a flow rate regulation plate (40, 41, Fig. 3) opposing the surface-to-be-processed (38, Fig. 3) and located in the chemical processing cup [col. 5, lines 48-65].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to apply the teaching of Agosta to Meakin and Marte et al. discussed above such that the chemical processor including a flow rate regulation plate opposing the surface-to-be-processed and located in the chemical processing cup for purpose of improving a chemical processor.

#### **Allowable Subject Matter**

9. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art of records does not disclose the chemical cup includes a chemical inlet port and a chemical drain port, and including a regulation member regulating effective aperture area located in the chemical drain port.

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**Conclusion**

10. **Applicants are advised to cancel the non-elected claims 4-11 in response to the next Office action if the application is considered to be allowed.**


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuc T. Dang whose telephone number is (571) 272-1776. The examiner can normally be reached on 8:00 am-5:00 pm.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and After Final communications.

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Phuc T. Dang

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Primary Examiner

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